Copy of REPORT and ESTIMATE made by The Commissioners of Paving, to the *Irish* Government, on the Subject of LIGHTING THE CITY OF DUBLIN WITH GAS.

Dublin, 18th September 1816.

SIR,

ACCORDING to your desire on Monday last, when I had the honour of an interview, I herewith enclose a detailed Estimate of the Expense of Lighting *Dublin* with Gas, made by a Mr. *Manby* of the Iron Works at Horsely near Birmingham, who came to Dublin to give in proposals for the Dunleary Harbour cast-iron work; and as he had furnished and directed the laying of the pipes in London, for the Gas Light Company, we thought it a favourable opportunity for getting the best information on that subject, when the person whose experience made him capable, was on the spot, where he could judge of circumstances, and make such an Estimate as he would execute the work for. He had not time, while here, to go through the whole of the streets in detail; he took a map of Dublin with him, to enable him to furnish the remainder of the streets, in the same detailed manner as those enclosed, which comprehend nearly one half of Dublin, but includes the whole expense of the Furnaces and Gasometers which will be required for the whole City; and is therefore more than half the expense necessary for lighting the whole.

There is likewise enclosed, a detailed Estimate of the Expense of Coal for making the Gas, made upon the experience of the quantity of Gas produced in London, (where he states it is not yet obtained in the most economical manner;) by which you will observe that the coke, &c. very nearly pays for the coal.

According to this information, perhaps it would take nearly 60,000 *l.* to furnish Dublin completely with Gas Light, but that would employ several years; and therefore if 30,000 *l.* was secured, to be delivered as follows; 10,000 *l.* for the first year, to be accounted for in the same manner as is now done for our other transactions; 10,000 *l.* the second year, if not wanted sooner; and 10,000 *l.* the third year, if the progress of the works did not require it sooner.

During the first year, the first 10,000 *l.* would cost 700 *l.*; the second 10,000 *l.* would cost 1,400 *l.*; the third 10,000 *l.* would cost 2,100 *l.* After this period, taking half the sum of Mr. Manby's Rental, as he calls it, of 14,273 *l.* 2 *s.* viz. 7,000 *l.*, would be a fund nearly sufficient to complete the remainder of the work progressively, or to borrow more money upon, to finish it with more dispatch, if that should be more adviseable.

It is to be observed, that the whole quantity of coals stated in Mr. Manby's Estimate, would not be required for the first three years; on an average of the three years, it would not amount to one half, which would be a saving equal to the interest of the 30,000 *l.* during the first three years.

At the conclusion of the works, according to the same Estimate, there would be a saving to the Public of 5,273 *l.* 2 *s.* to be paid for private or shop lamps, which is more than one half of what is now paid for oil light.

We have sent herewith a Map of Dublin, on which is marked, with a red tinge, the streets referred to in the Estimate.

Although we are desirous of taking the management of Lighting Dublin by Gas into our own hands, as a saving to the Public; yet if the Government think it would be more expedient to put it into the hands of contractors, we will contribute every thing in our power to forward it, as a matter of great importance to the City.

As the time for giving notice in the public papers, for an Act of Parliament, ends with this month, your early commands are requested; or if by contract, it would be proper to advertise for contractors, stating the period to which the Government may think it expedient to extend it.

We have the honour to be, with the greatest respect
and esteem, Sir, Your most obedient Servants,

Signed *Alex' Taylor,*
Thomas Nesbitt.

The Right honourable
ROBERT PEEL,
&c. &c. &c.

A true Copy,
C. W. Flint.
Irish Office, London,
7th March 1817.

ESTIMATE—CALCULATION OF THE PROBABLE EXPENSE OF LIGHTING DUBLIN WITH GAS, TO A CERTAIN EXTENT.

	Perches			£.	s.	d.
From Mespil to Bridge - - - -	50					
Leeson Street - - - - -	90					
South Side of Stephen's Green - -	60					
West Side of - Ditto - - - -	45					
Grafton Street to corner of Nassau Street	60					
Corner of Nassau Street to Carlisle Bridge	70					
Sackville Street to corner of Great Britain Street - - - - - -	100					
College Green & Dame Street, to Castlehill	90					
	565					
	7					
	3,955					
Loss of 2 Inches per Yard for Caulking -	219					
	4,174	Yards of 12-inch Main Pipes - - - - -	a' 24/	5,008	16	0
		Laying and caulking Dº with oakum and lead,	a' 6/3	1,304	7	6
East Side of Stephen's Green - - -	50					
Merrion Row - - - - -	15					
Merrion Street, and West of Dº Square -	60					
North Side of Stephen's Green - -	60					
Kildare Street - - - - -	60					
Dawson Street - - - - -	60					
Quay, from Carlisle Bridge to Essex Bridge	90					
	395					
	7					
	2,765					
Loss in Caulking - -	153					
	2,918	Yards of 8-inch Pipe - - - - - - -	a' 13/9	2,002	7	3
		Laying and caulking with oakum and lead -	a' 4/3	620	1	6
York Street - - - - - -	40					
Aungier Street - - - - -	30					
Great George Street - - - -	50					
Quay, from Essex Bridge to Queen's Bridge	130					
Queen's Street - - - - -	55					
Great Britain Street - - - -	90					
Canal Street - - - - - -	85					
Carlisle Bridge to Custom House, Beresford Place and Dock - - - -	100					
Marlborough Street - - - -	90					
Gloucester Street - - - - -	100					
Great Britain Street End - - -	50					
	820					
	7					
	5,740					
Loss in Caulking - -	319					
	6,059	Yards of 6-inch Pipe - - - - - - - -	a' 10/	3,029	10	0
		Laying, Dº with oakum and lead - - -	a' 3/6	1,060	6	6
Mercers Street - - - - - -	30					
Williams Street - - - - -	40					
Saint Andrew Street and Church Lane -	25					
Fleet Street - - - - - -	20					
Townsend Street - - - - -	100					
Quay, from Queen's Bridge to Barrack Bridge	40					
Tighe Street to Barrack Street - -	110					
Haymarket and Smithfield - - -	50					
King Street - - - - - -	130					
Abbey Street - - - - -	90					
Henry Street and Mary Street - -	90					
Denmark Street and Liffey Street - -	75					
Dominick Street - - - - -	100					
Temple Street - - - - -	70					
Hardwicke Place - - - - - } Eccles Street - - - - - }	70					
Sundry smaller Streets - - - -	300					
	1,340					
	7					
	9,380					
Loss in Caulking - -	521					
	9,901	Yards of 4-inch Pipe - - - - - - - -	a' 7/6	3,712	17	6
		Laying, Dº with oakum and lead - - -	a' 2/10	1,402	12	10
		Carried forward - -	£.	18,140	19	1

			£.	s.	d.	£.	s.	d.
Brought forward - - - £.						18,140	19	1
3 Sets 12-in. Bend Pipes, of 4 different radii	1. 15. 0. 0.	a' 12/6	21	17	6			
6 Sets 8-in. - - D° - - - D°	2. 9. 3. 20.	a' d°	31	4	1			
12 Sets 6-in. - - D° - - - D°	3. 12. 0. 0.	a' d°	45	0	0			
18 Sets 4-in. - - D° - - - D°	2. 18. 2. 0.	a' 13/	38	0	6			
Laying D°, 156 Pipes		a' 4/	31	4	0			
5,000 yards 1-in. Welded Tubes		a' 3/	750	0	0			
5,000 yards ¾-in. - - D°		a' 2/1	520	15	0			
5,000 yards ½-in. - - D°		a' 1/9	437	10	0			
Labour, forming the different connexions with the Mains, Drilling, &c. &c.			250	0	0			
12 12-in. Tar Well Pipes and Lids	5. 8. 0. 0.	a' 14/	75	12	0			
24 8-in. - - - D°	3. 15. 1. 20.		52	15	6			
36 6-in. - - - D°	4. 15. 3. 4.		67	1	6			
48 4-in. - - - D°	5. 13. 1. 20		79	16	4			
60 Hydraulic Valve Boxes, fitted complete		a' £.4	240	0	0			
60 Syphons		a' 30/	90	0	0			
104 Retorts - - - - - 59. 16		a' 13/	777	14	8			
104 Mouth Pieces - - - 7. 18.		a' 20/	158	0	0			
104 Sets Wrought Iron Work and Screws, 3,848 lbs.		a' 0/6	96	4	0			
104 short Socket Pipes	0. 18. 2. 8	a' 14/	13	0	0			
104 2-in. Flanch Pipes - - 208 yards		a' 4/	41	12	0			
104 connecting Pipes and Bonnets	2. 5. 0. 8.	a' 20/	65	2	0			
104 2-in. Hydraulic Pipes	1. 2. 1. 0.	a' 15/	15	8	0			
12 12-in. Hydraulic Cylinders	6. 12. 0. 0.	a' 13/	85	16	0			
100 yards 8-in. Communication Pipes		a' 15/6	72	10	0			
26 Fire Doors, Wrought Iron Work, complete		a' 14/6	24	13	0			
26 Inner Doors - - - 1 1. 40.		a' 10/	10	11	8			
26 Top Dampers	0. 13. 0. 0.	a' 14/	9	2	0			
26 Register Dampers, Iron Work and fitting		a' 14/	13	14	0			
26 Sight Holes	0. 6. 0 0	a' 13/	3	18	0			
26 Sets Bars and Bearers - - 1. 4.		a' 10/	12	0	0			
Expense of Four Cast Iron Tanks, each 34 feet diameter, and 18 feet deep, with Four Gasometers, each 33 feet diameter, and 17 feet deep, together with Sills, Frames, Slides, Beams, Caps, Wheel and Chain Work, all put together, complete			5,400	0	0			
Excavations for the above			150	0	0			
Pillars and Roof over D°			700	0	0			
1 Tar Receiver - - - - 6½ tons		a' 13/	84	10	0			
2 Lime Machines, fitted complete			200	0	0			
Retort House, with Iron Roof, Pillars and Platform, and setting Retorts			1,500	0	0			
						12,164	11	9
					£.	30,305	10	10

4 GASOMETERS, - - - - 33 × 17, will each hold	14,540 4	cubic feet of Gas				£.	s.	d.
	58,160							
Assume for Gas making, during the time of burning, at least	58,160							
		116,320						
A Chaldron of Coals produces in London about 12,000 cubic feet of Gas, (but should produce more;) so that it will require to make the above quantity of Gas, about	Chal. Bush. 9 24							
Add 20 per cent. for carbonizing	1 33							
	11 21	per day.						
Parish Lamps, with Batwing Burners, should burn ten hours, at three cubic feet per hour; 3,000 Lamps would consume	90,000	cubic feet.						
Shop Lamps, with Argand Burners, should burn four hours, at four cubic feet per hour; 1,674 Lamps would consume	26,320							
		116,320						
Assuming Coal in Dublin to cost 25/ per ton, on 14½ tons per day, (equal to 11 chal 21 bush.) for 200 days	Tons. 2,900							
7¾ Tons per day, for 365 days	1,196							
	4,096	a' 25/ - - £.				5,120	0	0
Deduct Product per Chaldron of Coal:								
1½ Chaldron of Coke,								
12 Gallons of Tar,								
18 Gallons Ammoniacal Liquor (used for Distillation) is, on 2,760 Chal. Coals:—			£.	s.	d.			
3,450 Chaldrons of Coke		a' 18/	3,105	0	0			
27,120 Gallons of Tar		a' 0/6	678	0	0			
40,680 Gallons Ammoniacal Liquor		a' 0/3	508	10	0			
						4,291	10	0
Annual Cost of Fuel			- - - -			829	10	0
Rental of 3,000 Street Lamps, at £.3. per Annum			9,000	0	0			
- D° - 1,674 Shop - D° - at £.3. 3*s.* per Annum			5,273	2	0			
ANNUAL RENTAL - £.			14,273	2	0			

A true Copy,
C. W. Flint.

(Ireland.)

Copy of

REPORT AND ESTIMATE

Made by the Commissioners of Paving, to the
Irish Government, on the Subject of LIGHTING
THE CITY OF DUBLIN WITH GAS.

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